

METHOD FOR USING CONTROL SHEETS TO CONTROL SCANNING DEVICES

BACKGROUND OF THE INVENTION

5

1. Field of the Invention

This invention relates to control of scanning devices, more particularly to using control sheets to control these devices.

2. Background of the Invention

10

The increased availability of scanning devices in the office environment has led to methods to increase their convenience. Scanning devices include any device that has the capability to scan, such as fax machines, copiers, scanners, etc. One of these methods is the use of control sheets in scanning devices to direct the scanner operation. A control sheet typically includes some type of codes or instructions that can be interpreted by the scanning engine on the scanning device.

15

One example of such a method is found in US Patent No. 5,659,164, issued August 19, 1997. In this method, a control sheet is inserted into the scanning job at the beginning of the job. Several jobs can be stacked together, but the control sheet must be first for any given job. The control sheet has machine-readable coded instructions, referred to as MRI, that direct the scanner in certain operations. The control sheet can direct settings for the scanner, or routing of the scan job to recipients across a network.

20

However, two shortcomings in this approach become apparent upon further study. First, having to place the control sheet first may be inconvenient.

25

658741"HESES0

The user may have forgotten the control sheet until the scanning job has already started, or it may be out of order. The time and processing used to complete that particular scan job has then been wasted. It will have to be repeated with the control sheet in the proper place. Further, for some applications, putting the control information first may be impractical.

Second, use of machine-readable code can be awkward and time consuming. In order for the user to produce control sheets with the machine-readable code, the desired operations must be entered into a converter and the resulting code placed on the control sheet. It would seem far more convenient if the user could type or even hand print the instructions on a control sheet and then use that sheet instead of having to convert it. Furthermore, other applications would be possible if the control instructions are not held to the machine-readable format.

Therefore, a method is needed that allows the control sheets to be placed anywhere within a scanning job, such as a fax, copy or scan job, and that can use formats other than machine readable code.

68720"4E23E6

SUMMARY OF THE INVENTION

An aspect of the invention is a method for controlling scanning devices using control sheets. The method includes the steps of starting the scanning job, locating the control image, processing the control image and
5 creating output in accordance with the control image. Alternative embodiments include creating output prior to processing the control image. The scanning job could be one of image acquisition, such as scanning documents for e-mail or OCR analysis, or one of image production, such as faxing or copying.

In alternative embodiments, the control image could be text, such as a
10 typed or handwritten cover sheet, or an identification badge, or numbers as in an employee number or credit card number. The control image could also be in machine-readable code.

606750 "The End"

BRIEF DESCRIPTION OF THE DRAWINGS

For a more complete understanding of the present invention and for further advantages thereof, reference is now made to the following Detailed Description taken in conjunction with the accompanying Drawings in which:

5 Figure 1 shows one embodiment of a method to control scanning devices with the use of control sheets, in accordance with the invention.

 Figure 2 shows an alternative embodiment of a method to control scanning devices with the use of control sheets, in accordance with the invention.

10 Figure 3 shows an alternative embodiment of a method to control scanning devices with the use of control sheets, in accordance with the present invention.

036720 "4633660

in the discussion, it may be easier to process the information from the control image after the scanning of the documents is completed.

For the example in Figure 1, the control instructions are processed prior to creating the output. In either step 12 or step 14, the decoding of the instructions at step 18, may be included. Decoding the instructions may be done immediately upon location of the image, or at the point when the instructions are going to be executed. There is no limitation in the invention as to when this step occurs. Finally, in the example of Figure 1, the output is created in step 16 in accordance with the control instructions.

In the example of Figure 2, an alternative embodiment is disclosed. The first two steps of the process are the same as those in Figure 1. However, in this case the output is created prior to the control instructions being processed. Again, as was discussed relative to Figure 1, the decoding step 18, can be performed either as part of step 12 or as part of step 14.

In this example, as mentioned above, it may be more practical to produce the output prior to processing the control instructions. For example, it has become common for companies to track use of copiers shared by several departments so the overhead for the copier can be divided fairly among the departments.

The user would scan their documents in using the copier and create the output. The control image would then be something like an identification card that the employee could lay on the platen. The copier would then process the control instructions, comprising of the employee's name and possibly their

5
10
15
20

department, and then charge that job to that department. Other examples could include credit card images used to bill copies at copy shops, or other forms of user identification. These examples are not restricted to the method as shown in Figure 2, but are equally applicable to the methods of Figure 1, but are merely used to further explain the alternative embodiment.

A second alternative embodiment is shown in Figure 3. In this embodiment, two different types of control sheets are used. For example, a first control sheet could be a set of directions to operate the scanning device. In this embodiment, the job is started at step 20. The first control image, which could be the directions given in the above example, among other things, is located at step 22. Again, as with the examples of Figures 1 and 2, the image of the control sheet can be processed to decode the instructions at this point or just prior to processing, both referred to as step 32. The first set of control instructions is processed at step 24.

In this example, the first set of control instructions is assumed to be the directions for operation of the scanning device. However, this is not intended to limit the application of the invention. The two sets of control images could be inserted into the scanning job simultaneously, or other options for the control images could be used first. However, for discussion purposes, the first control sheet will be assumed to be the operating instructions. The output would then be produced in step 26.

After creation of the output, the process could then move to step 28 and locate the second control image. The second control image could be an

